

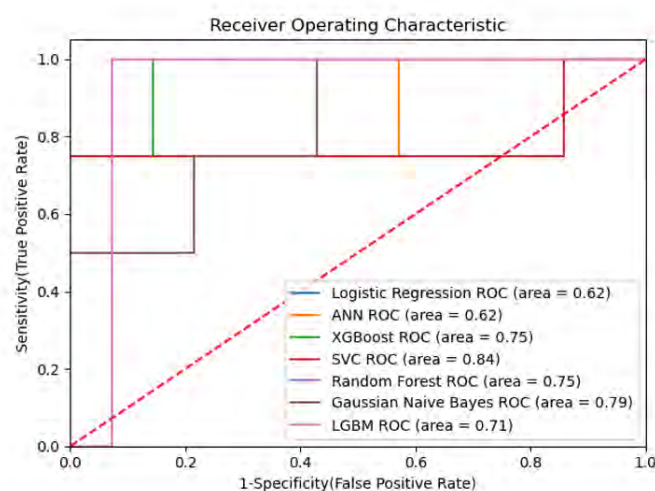


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Table 1 Patient and tumor characteristics

Characteristics	Number of patients (%) /Median (min-max)
Gender	
Male	75 (87.2%)
Female	11(12.7%)
Age	60 (40-81)
KPS score	80 (60-100)
BMI	25 (17-36)
Smoking history	
Present/Absent	74 (86%) /12(14%)
COPD diagnosis	
Present/Absent	13(15.1%) /73(84.8%)
Tumor size (mm)	57 (15-140)
Tumor localization	
Right upper lobe/Right middle lobe/Right lower lobe	23 (26.7%) /20 (23.2%) /6 (6.9%)
Left upper lobe/Left lower lobe	24 (27.9%) /13 (15.1%)
Metastatic lymph node level	
Single/multilevel	9 (10.4%) /77 (89.5%)
Metastatic lymph node localization	
Hilar/Mediastinum/Mediastinum + hilar/Mediastinum + supra/Mediastinum + hilar + supra	2 (2.3%) /26 (30.2%) /52 (60.4%) /4 (4.6%) /2 (2.3%)
T stage	
T2/T3/T4	3 (3.4%) /24 (27.9) /59 (68.6%)
N stage	
N1/N2/N3	2 (2.3%) /55 (63.9%) /29 (33.7%)
TNM stage	
IIIA/IIIB/IIIC	4 (4.6%) /57 (66.2%) /25 (29.0%)
Pretreatment Hgb (g/L) /NLR	13.4 (8.6-16.6) /3.0 (0.9-24.5)
GTV (cc)	92(14-423)
PTV (cc)	468(68-1770)



Conclusion

Considering high treatment costs, potential serious toxicity, the harm of early progression, and low survival in cases of ineffective treatment, machine learning-based predictive systems are promising.

PO-1181 Hypofractionation in NSCLC as the new standard of care during SARS-CoV-2 pandemia.

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Purpose or Objective

Radical hypofractionated radiotherapy has traditionally been a common treatment for inoperable non small cell lung cancer (NSCLC) in the United Kingdom. However, in order to reduce the time spent at the hospital, hypofractionation schemes have played an important role during the Sars-CoV2 pandemia.

This study evaluates the treatment outcome in terms of local control, overall survival and acute toxicity of NSCLC treated with external radiotherapy (ERT) with moderately hypofractionation in two different centers from the South of Spain.

Materials and Methods

A retrospective and multicentric review of 50 patients with inoperable lung cancer treated with concomitant chemoradiotherapy or radical radiotherapy alone between 2019 and 2020 was performed. The patients were treated with 55Gy in 20 fractions (BED10= 70Gy) over 4 weeks.

Inclusion criteria: treatments with ERT (modulated intensity, VMAT or 3D), histologic confirmation with biopsy, and acceptable dosimetric parameters for hypo fractionated treatment.

Among the considered patients, 46% had a histologic confirmation of squamous cancer, 34% of adenocarcinoma, and the remaining 20% presented other histologies or no specific large cell cancer. The extension study was done with CT-PET for 94% of the patients. CTCAE v.5 scale was used to evaluate the toxicity during the treatment.

In the statistical analysis, Kaplan Meier curves were used to compute overall survival, and long-rank test to compare them.

Results

The median age of the patients was 70 years (52-86) and male sex was predominant (88%).

Concomitant chemotherapy was applied in 40% of the patients, radical radiotherapy alone in 38%, and sequential systemic treatment in 2%. The stage was T1-T2 in 36% of patients and T3-T4 in 54%, 44% of patients did not have involved mediastinal nodes and 28% had metastatic disease.

The local control with a median follow-up of 14,8 months (10,07-19,51) was 58%. The remaining 14% of patients presented progression of the disease (6% distant progression and 8% local progression) and 28% of the patients died.

All patients finished the treatment, but 6% had to interrupt it. Not severe toxicity appeared during the treatment, grade 3 included esophagitis (2%), hematologic toxicity (6%) in the concurrent chemotherapy group, and pneumonitis (2%). No cardiac toxicity was observed.

No significant statistical relationship has been found between the heart toxicity ($p = 0.213$), esophagus ($p = 0.180$) or lung ($p = 0.179$) and the location of the tumor.

Conclusion

Our results suggest that a hypofraction scheme of 55Gy/20, for concomitant chemo-radiation or radical radiation, is an effective treatment with acceptable toxicity. The overall survival is similar to other studies with conventional fractionation without added morbidity.

PO-1182 The Relation of miRNA21/155 levels with acute side effects and treatment response in stage III NSCLC

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Purpose or Objective

It is known that increased miRNA-21 and miRNA-155 expression levels are a poor prognostic factor for survival, despite, studies on treatment-related adverse effects are limited. In our study, we aimed to evaluate the relationship between the change in miRNA expression levels at the beginning and end of treatment, acute adverse effects, and early response level of the tumor in stage III non-small cell lung cancer (NSCLC) patients with definitive chemoradiotherapy (CRT).

Materials and Methods

A total of 21 patients with stage III NSCLC who received definitive CRT between October 2019-April 2020 were prospectively evaluated. The expression levels of miRNA-21 and miRNA-155 in serum at the beginning and end of the treatment were determined by quantitative real-time polymerase chain reaction (qRT-PCR) and the fold change value was calculated according to the livac formula. Acute side effects were scaled with the Cooperative Group Common Toxicity Criteria Acute Side Effects (CTCAE) version 5.0 criteria, and treatment response was evaluated according to RECIST1.1 criteria at 3 months post-treatment. Mann Whitney-U and Kruskal-Wallis test were used for independent variables and the Wilcoxon test for dependent variables in the analysis and comparison of the data.

Results

In our study, both miRNA-21 ($p=0.004$) and miRNA-155 ($p=0.27$) values increased after CRT. The most common side effects were hematological side effects. While the median expression values of miRNA-21 and miRNA155 were significantly lower at the beginning and the end of the treatment in patients with grade 3 and above side effects, the fold change was similar but not statistically significant. Radiation esophagitis was the most common side effect among acute non-hematological side effects of grade 3 and above. Patients with grade 3 or more esophagitis had higher miRNA-21 and miRNA-155 values at the beginning and end of treatment. The fold change was similar in miRNA-21 while it increased in miRNA-155 (2.12 (1.6-3.1) vs 0.16 (0-142); $p = 0.42$). The median values of both miRNA21 and miRNA-155 at the beginning and end of treatment were lower in